

Please replace the paragraph spanning lines 11-23 on page 33 of the application with the following:

--In one method when identity verification 1100 is desired as shown in Figures 10 and 11, a tissue spectrum 1000, 1110 and purported identity 1010, 1120 are obtained from the target individual. The current tissue spectrum is subtracted from the appropriate enrollment spectrum, producing a spectral difference 1020. The spectral difference 1020 can then be decomposed using the factors generated from the calibration dataset and the consistency between the spectral difference and the calibration set can be calculated 1140. One calculation measures the Mahalanobis distance of the spectral difference with respect to the calibration factor set. If the distance is less than a threshold distance, then the purported identity can be positively verified 1030, 1130. Another calculation generates the spectral residuals of the spectral difference with respect to the calibration factor set. If the residuals are less than a predetermined threshold value, then the purported identity can be positively identified 1150. In another method, both the spectral residual and the Mahalanobis distance must be below their respective thresholds before identity is positively established. --

In the Drawings

Applicants have amended the drawings to include Figures 8-12 accompanying this amendment.

In the Claims

Please cancel claims 11 and 45 without prejudice.

Please amend claims 10, 33 and 47 as follows:

10. (Once Amended) A system for identifying a target individual comprising: an enrollment database including tissue optical spectral data collected from one or more enrolled persons, said enrolled persons optical spectral data having a plurality of measurement values;

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means for obtaining at least one tissue optical spectral data from said target individual, wherein said means for obtaining said target individual spectral data includes means for measuring optical radiation reflected from sub-epidermal tissue of said target individual, said target individual's optical spectral data having a plurality of measurement values;

means for comparing said target individual optical spectral data and said all enrolled persons optical spectral data, said comparison providing a measure of the degree of similarity between said target optical spectral data and said enrolled persons spectral data; and

means for indicating identity as at least one of the said enrolled persons if the corresponding measure of degree of similarity is at least as similar as an established threshold value.

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33. (Once Amended) A method for identifying a target individual utilizing an enrollment database including tissue optical spectra collected from a number of enrolled individuals, said spectral data having a plurality of measurement wavelengths, comprising the steps of:

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obtaining target tissue spectral data from said target individual, said target tissue optical spectral data having a number of measurement wavelengths, wherein said tissue spectra include a substantial spectra contribution from sub-epidermal tissue;

comparing said target individual optical spectral data and said enrolled person's optical spectral data, said comparison providing a measure of the degree of similarity between said target optical spectral data and each of said enrolled person's spectral data; and

positively establishing said target individual's identity by confirming that said target individual's measure of spectral similarity is at least as similar to one of the enrolled person's optical spectral data as an established threshold value.

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47. (Once Amended) A method for identifying a target individual comprising the steps of:

obtaining a number of enrollment optical tissue spectra from a number of individuals, said enrollment tissue optical spectra having a plurality of measurement wavelengths;

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obtaining a target tissue spectrum from said target individual, said target tissue spectrum having a number of measurement wavelengths, wherein said tissue spectra include a substantial spectra contribution from sub-epidermal tissue;

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performing discriminant analysis on said target tissue spectrum and all of said enrolled tissue spectral data; and

positively identifying said target identity if, and only if, said discriminant analysis is satisfied for at least one of said enrolled persons optical spectral data.
